GOVERNMENT OF INDIA
EARTH SCIENCES
LOK SABHA

UNSTARRED QUESTION NO:3900
ANSWERED ON:09.08.2017
Drugs from Sea
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Will the Minister of EARTH SCIENCES be pleased to state:

(a) the salient features of the 'Drugs from Sea' research programme;
(b) the funds allocation and utilization for the programme; and
(c) the details of the research projects currently being funded under this programme?

Answer

MINISTER OF STATE FOR MINISTRY OF SCIENCE AND TECHNOLOGY AND MINISTRY OF EARTH SCIENCES
(SHRI Y. S. CHOWDARY)

(a) The salient features of the 'Drugs from Sea' research programme on "Development of Potential Drugs from Sea" are:
â€¢ To identify bio active substances (leads) from marine biota (in coordination with multiple labs, from national research institutes and universities), synthesis of new scaffolds and their modifications for the new drug development.
â€¢ Identification of active principles from marine flora, fauna, and microbial biota, their chemical synthesis.
â€¢ Optimization of hits/leads from previous plan.
â€¢ Synthesis of new analogs of marine leads and their bio-evaluation.
â€¢ Setting up new in vitro and in vivo screens.
â€¢ Development of new hits/leads for various disorders.
â€¢ In vitro screening of ~300 marine extracts / fractions / single molecule.
â€¢ Confirmation of the in vivo efficacy.
â€¢ Pharmacokinetics, Pharmaceutical, Safety Pharmacology and Toxicity studies (preclinical studies with active samples/compounds)
â€¢ Clinical trial of phase I of samples/compounds identified for drug development.
â€¢ Clinical trial of phase II of samples/compounds identified for drug development.
â€¢ Collection and preservation of samples from deep sea.
â€¢ Extraction of bioactive compounds and initial screening.
â€¢ Transfer of potential candidates to the core group of Drugs from the Sea programme for further screening and testing.
â€¢ Undertake in-vivo screening of the active fraction/compound in suitable models and development of disease models if necessary
â€¢ Chemical synthesis of marine scaffolds and SAR for the new drugs development, identification, and optimization of active principles from marine flora, fauna, and microbial biota.
â€¢ Setting up of suitable enzymes, receptors, cell culture and animal models for biological activity for the bio-evaluation of marine extracts/ fractions/ single molecule.

(b) The total allocation of fund for the DFS programme during XII (2012-13 to 2016-17) plan period was Rs. 9623.646 lakhs and a total amount of Rs. 2464.59502 lakhs has been actually incurred during 12th plan period.

(c) The details of the research projects currently being funded under this programme are in Annexure-I.